

This listing of claims will replace all prior versions, and listings, of claims in the application:

In the Claims:

1-12. Canceled.

13. (CURRENTLY AMENDED) A variable length table decoder for decoding compressed video data using variable length code tables, wherein the compressed video data includes variable length encoded data representing an image area of a transmitted frame, the variable length table decoder being coupled to a memory which stores variable length encoded data and a shifter circuit associated with the memory which makes a predetermined number of bits of the variable length encoded data visible, comprising:

a memory for storing variable length encoded data;
a pattern match circuit coupled to the memory for identifying a unique prefix pattern in the variable length encoded data, each unique prefix pattern having a prefix pattern length;

variable length code table data including a decoded value associated with each of a plurality of variable length codes, wherein the variable length code table data comprises a plurality of subtable data circuits each associated with a unique prefix pattern in the variable length codes and independent of the prefix pattern length;

a datapath coupling the memory to each of the subtable data circuits for applying variable length encoded data to each of the subtable data circuits; and control circuitry responsive to the pattern match circuit for obtaining a decoded value from the subtable data circuit associated with the unique prefix pattern in the variable length codes that matches the identified prefix pattern in the variable length encoded data, and additional data in the variable length codes after the unique prefix pattern that matches additional data in the variable length encoded data after the identified prefix pattern.

14. (ORIGINAL) The variable length table decoder of claim 13 wherein each of the variable length codes includes an associated code length, and wherein the control circuitry is responsive to the pattern match circuit for obtaining a code length from the subtable data circuit associated with the unique prefix pattern in the variable length codes that matches the identified prefix pattern in the variable length encoded data, and additional data in the variable length codes after the unique prefix pattern that matches additional data in the variable length encoded data after the identified prefix pattern.

15. (ORIGINAL) The variable length table decoder of claim 14 further comprising a shifter circuit associated with the memory for applying a predetermined number of bits of the variable length encoded data from the memory to the pattern match circuit.
16. (ORIGINAL) The variable length table decoder of claim 15 wherein the shift circuit includes a plurality of selector circuits for selectively shifting the variable length encoded data in the memory.
17. (ORIGINAL) The variable length table decoder of claim 16 wherein the plurality of selector circuits are arranged in a plurality of selector stages, wherein each selector stage is operable to shift the variable length encoded data in memory by a power of two or to provide no shift of the variable length encoded data.
18. (ORIGINAL) The variable length table decoder of claim 17 wherein at least one of the selector stages includes fewer selector circuits than a preceding selector stage.
19. (ORIGINAL) The variable length table decoder of claim 17 wherein each selector stage includes fewer selector circuits than its preceding selector stage.

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20. (ORIGINAL) The variable length table decoder of claim 16 wherein the shifter circuit is responsive to the last obtained code value for shifting the variable length encoded data in the memory by a number of bits equal to obtained code value.

21. (CURRENTLY AMENDED) A method for decoding a stream of compressed video data using variable length code tables, wherein the stream includes a plurality of variable length encoded data representing image areas of transmitted frames, comprising the steps of:

defining a variable length code table including a decoded value associated with each of a plurality of variable length codes;

defining a plurality of unique prefix patterns associated with the variable length codes, each unique prefix pattern having a prefix pattern length,

defining a plurality of subtables, wherein each subtable is associated with one of the unique prefix patterns in the variable length codes and includes independent of the prefix pattern length, each subtable including at least one decoded value that is associated with the unique prefix pattern and additional data in the variable length code after the unique prefix pattern;

identifying in the variable length encoded data one of the unique prefix patterns associated with the variable length codes; and

obtaining a decoded value from the subtable associated with the unique prefix pattern in the variable length codes that matches the identified prefix pattern in the variable length encoded data, and additional data in the variable length codes after the unique prefix pattern that matches additional data in the variable length encoded data after the identified prefix pattern.

22. (ORIGINAL) The method of claim 21 further comprising the steps of:
associating a code length with each of the plurality of variable length codes; and
obtaining a code length associated with the variable length code having a prefix pattern that matches the identified prefix pattern in the variable length encoded data, and additional data after the prefix pattern that matches additional data in the variable length encoded data after the identified prefix pattern.

23. (ORIGINAL) The method of claim 21, further comprising the steps of:
identifying in the variable length encoded data one of the unique prefix patterns associated with the variable length codes; and
simultaneously applying the additional data in the variable length encoded data to each of the plurality of subtables,
wherein a decoded value is obtained from the subtable associated with the unique prefix pattern in the variable length codes that matches the identified prefix pattern in the variable length encoded data, and additional data in the variable length codes after the unique prefix pattern that matches additional data in the variable length encoded data after the identified prefix pattern.